DIVISION OF ENVIRONMENTAL SERVICES

MUNICIPAL WATER QUALITY PROGRAM

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MWQP Field Section

Independent Science Board

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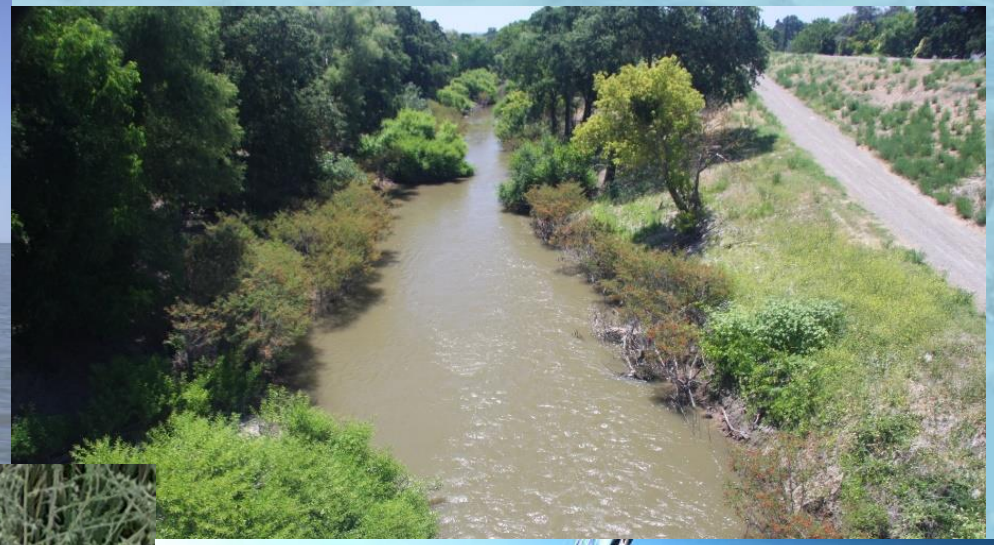
CA Drinking Water Standards

Regulations	Name of Contaminant	MCL / MCLG (mg/L unless noted)	Health Effects of Contaminant
Disinfectants and Disinfection Byproducts	**Stage 1 D/DBPR**		
	Disinfectants		
	Chlorine	4.0 (as Cl_2) MRDL / 4 MRDLG	Eye/nose irritation; stomach discomfort
	Chloramines	4.0 (as Cl_2) MRDL / 4 MRDLG	Eye/nose irritation; stomach discomfort; anemia
	Chlorine Dioxide	0.8 (as ClO_2) MRDL / 0.8 MRDLG	Anemia; nervous system problems
	Disinfection Byproducts		
	Total Trihalomethanes (TTHMs)	0.080	Cancer risk; potential reproductive system effects; liver/kidney/ nervous system problems
	Haloacetic Acids (HAA5)	0.060	Cancer risk
	Chlorite	1.0 / 0.8	Anemia; nervous system problems
	Bromate	0.010 / 0	Cancer risk
	Total Organic Carbon (TOC)	TT	
	Stage 2 D/DBPR		
	Disinfection Byproducts		
	Total Trihalomethanes (TTHMs)	0.080	Cancer risk; potential reproductive system effects; liver/kidney/ nervous system problems
	Chloroform	/ 0.07	
	Bromodichloromethane (BDCM)	/ 0	
	Bromoform	/ 0	
	Dibromochloromethane (DBCM)	/ 0.06	
	Haloacetic Acids (HAA5)	0.060	Nervous system/liver effects
	Monochloroacetic Acid (MCAA)	/ 0.07	
	Dichloroacetic Acid (DCAA)	/ 0	
	Trichloroacetic Acid (TCAA)	/ 0.02	

Depending on treatment technique (TT), DWTP's can exceed these standards if Delta source waters are high in organic carbon & bromide.

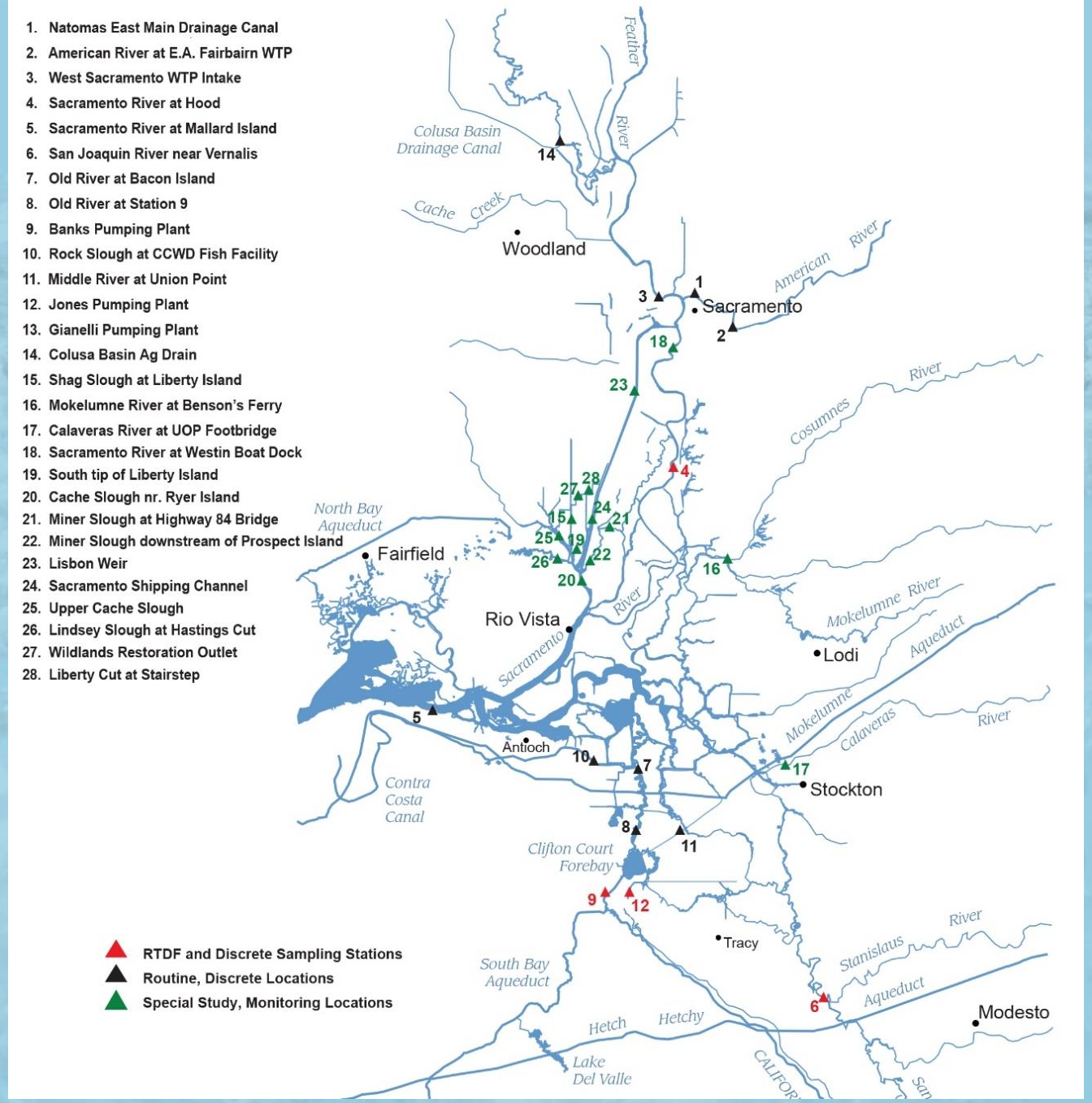
Surface WQ Conditions

Standards for DW, but not for surface water that becomes DW…



MWQI Discrete and RTDF Monitoring Locations

1. Natomas East Main Drainage Canal
2. American River at E.A. Fairbairn WTP
3. West Sacramento WTP Intake
4. Sacramento River at Hood
5. Sacramento River at Mallard Island
6. San Joaquin River near Vernalis
7. Old River at Bacon Island
8. Old River at Station 9
9. Banks Pumping Plant
10. Rock Slough at CCWD Fish Facility
11. Middle River at Union Point
12. Jones Pumping Plant
13. Gianelli Pumping Plant
14. Colusa Basin Ag Drain
15. Shag Slough at Liberty Island
16. Mokelumne River at Benson's Ferry
17. Calaveras River at UOP Footbridge
18. Sacramento River at Westin Boat Dock
19. South tip of Liberty Island
20. Cache Slough nr. Ryer Island
21. Miner Slough at Highway 84 Bridge
22. Miner Slough downstream of Prospect Island
23. Lisbon Weir
24. Sacramento Shipping Channel
25. Upper Cache Slough
26. Lindsey Slough at Hastings Cut
27. Wildlands Restoration Outlet
28. Liberty Cut at Stairstep



DEPARTMENT OF WATER RESOURCES

STATE OF CALIFORNIA

MWQP Data Production Pathway

Carbon Analyzer

Anion Analyzer

YSI sonde (Gianelli)

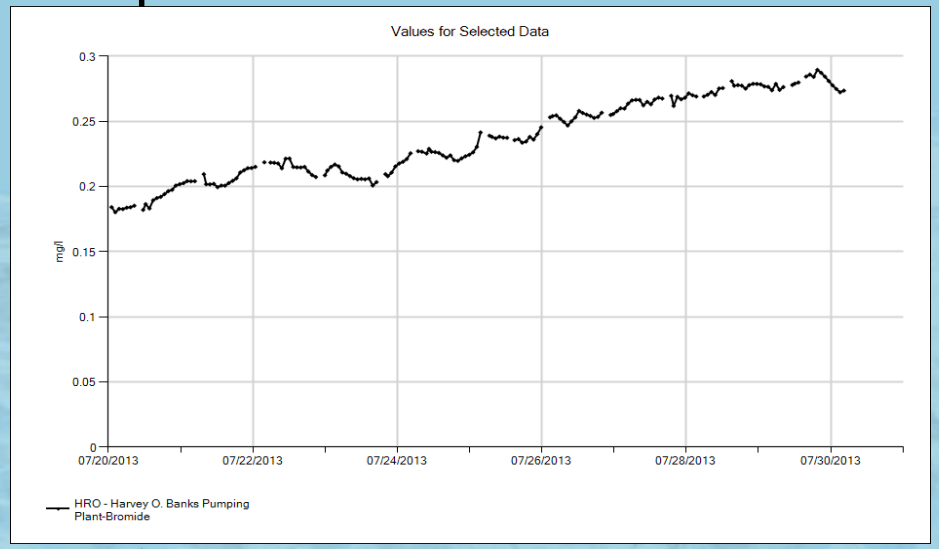
Instrument Computer

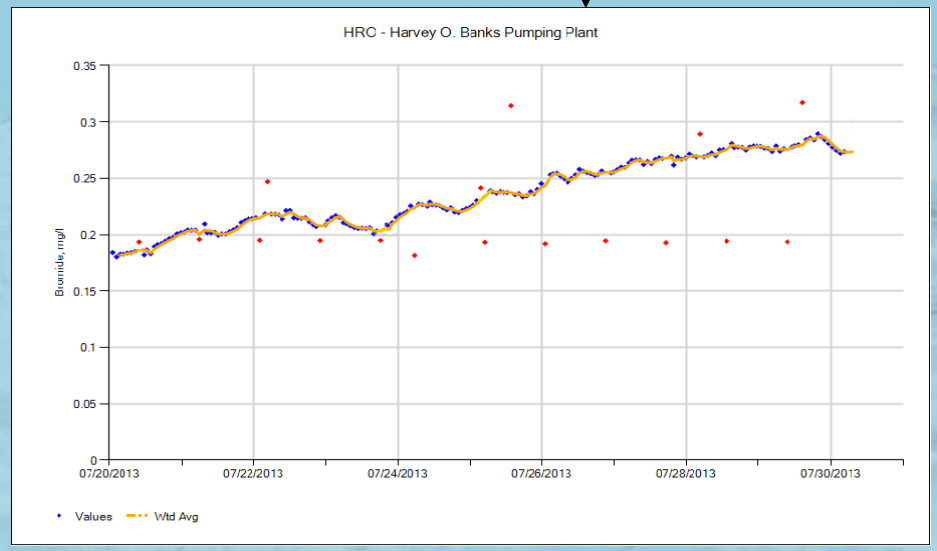
Wireless Cellular Modem

Server

...

SQL Server Database/Data Utility → QA/QC Processes





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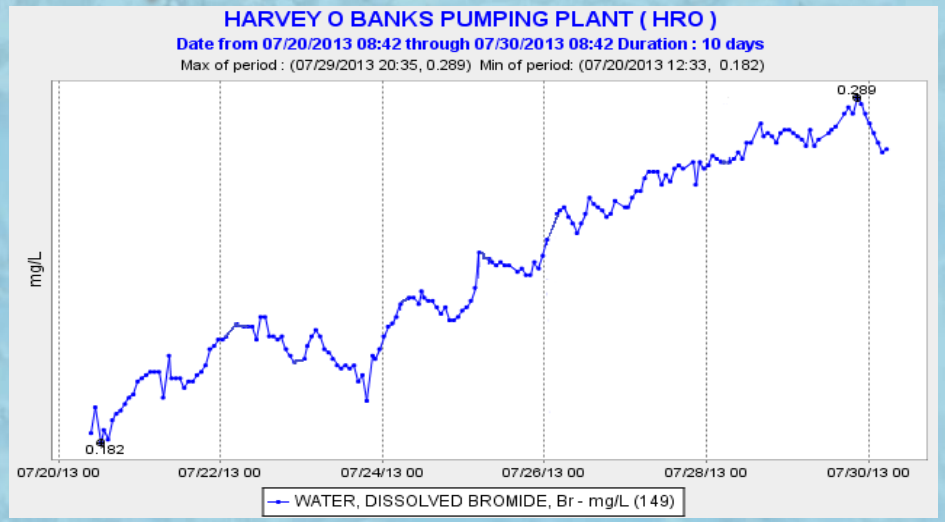
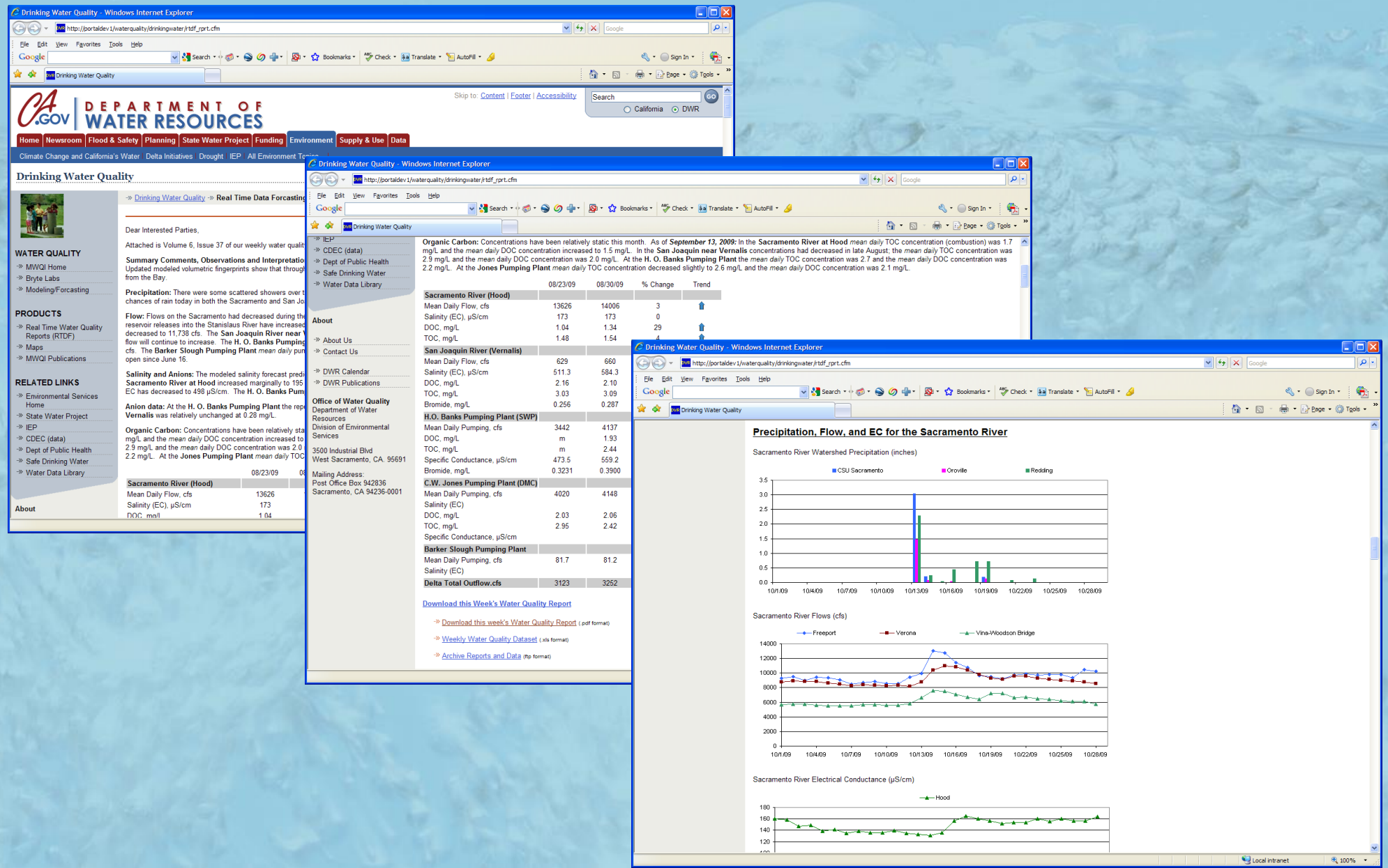


CDEC

To Water Data Library (WDL) and… → …

MWQP WQ Report Summary



So, getting the data out provides…
…stakeholders with a vision into the future

- First, by analyzing real-time data for water quality which will eventually reach their facilities.
- Second, by providing models and forecasting tools.
- These give stakeholders the ability to:
  - develop surface water triggers such as
    TOC = 4mg/L
    EC = 700uS/cm
    Br = 0.4mg/L
  - make informed decisions regarding DWTP operations
  - allow stakeholders to optimize operations, balance resources, save time and money = effective efficiency

Questions ?

Contacts

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